

**IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**

Appl. No. : 10/526,848
Applicant(s): Ling Wang
Filed: September 29, 2005
TC/A.U.: 2600/2618
Examiner: Tan H. Trinh
Atty. Docket: US 020306 US
Confirmation No.: 9363
Title: MASTER-SLAVE ORIENTED TWO-WAY RF
WIRELESS LIGHTING CONTROL SYSTEM

APPEAL BRIEF

Honorable Assistant Commissioner for Patents
P.O. Box 1450
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Sir:

In connection with the Notice of Appeal and the decision on the Pre-Appeal Request for Review, Applicants provide the following Appeal Brief in the above-captioned application.

1. Real Party in Interest

Koninklijke Philips Electronics N.V., having a place of business at Groenewoudseweg 1, 5621 BA Eindhoven, NL.

2. Related Appeals and Interferences

There are no known related appeals or interferences in the present application.

3. Status of the Claims

Claims 1-20 are pending in the application. Claims 1-20 are rejected. Claims 1-20 are the subject of the present Appeal and are reproduced in the Appendix.

4. Status of the Amendments

A Response under Rule 111 was filed on April 21, 2009. A non-final rejection was mailed on June 30, 2009. A pre-Appeal Request for Review and Notice of Appeal were filed on September 25, 2009.

5. Summary of the Claimed Subject Matter¹

Referring to claim 1:

In a representative embodiment, a lighting control network (e.g., 100, Fig. 1A) comprises a remote control unit (e.g., 40, 42, Fig. 1A) having a RF signal transmitter and a RF signal receiver. The lighting control network (e.g., 100) further comprises a plurality of lighting control units (e.g., 5, 15, 25, Fig. 1A), each of said lighting control units having a RF signal transmitter, a RF signal receiver, and a lighting unit associated therewith. The remote control unit (e.g., 40, 42) and the plurality of lighting control units (e.g., 5, 15, 25) are configured in a master-slave oriented network. One of said plurality

¹ In the description to follow, citations to various reference numerals, drawings and corresponding text in the specification are provided solely to comply with Patent Office Rules. It is emphasized that these reference numerals, drawings and text are representative in nature, and in not any way limiting of the true scope of the claims. It would therefore be improper to import any meaning into any of the claims simply on the basis of illustrative language that is provided here only under obligation to satisfy Patent Office rules for maintaining an Appeal.

of lighting control units (e.g., 5, 15, 25) and the remote control unit (e.g., 40, 42) are configured as a master in the network and remaining lighting control units of the plurality of lighting units and the remote control unit being configured as slaves in the network (e.g., 100). The plurality of lighting control units (e.g., 5, 15, 25) and the remote control unit (e.g., 40, 42) communicating bi-directionally with each other via a RF wireless link (e.g., as shown in Fig. 1A as 'dashed' lines). (Kindly also refer to Fig. 1A and page 5, line 9 through page 6 line 25 of the filed application.)

Referring to claim 11:

A method for configuring a lighting control network (e.g., 100, Fig. 1) comprises configuring a remote control unit (e.g., 40, 42, Fig. 1A) having a RF signal transmitter and a RF signal receiver and a plurality of lighting control units (e.g., 5, 15, 25). Each of the lighting control units (e.g., 5, 15, 25) comprises a RF signal transmitter, a RF signal receiver, and a lighting unit associated therewith, in a master-slave oriented network. The method further comprises designating one of the plurality of lighting control units (e.g., 5, 15, 25) and the remote control unit (e.g., 40, 42) as a master in the network and designating remaining lighting control units of the plurality of lighting units and the remote control unit as slaves in said network. The method further comprises communicating bi-directionally between the plurality of lighting control units (e.g., 5, 15, 25) and the remote control unit (e.g., 40, 42) via a RF wireless link (e.g., as shown in Fig. 1A as 'dashed lines'). (Kindly also refer to Fig. 1A and page 5, line 9 through page 6 line 25 of the filed application.)

6. Grounds of Rejection to be Reviewed on Appeal

The grounds of rejection to be reviewed on appeal are:

- I. The rejection of claims 1-7, 9-17 and 19-20 under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Josephsoon, et al.* (U.S. Patent Application Publication

20080034331) in view of *Haupt* (U.S. Patent Application Publication 20020042282);

II. The rejection of claims 8 and 18 under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Josephsoon, et al.*, *Haupt*, and *Crookham, et al.* (U.S. Patent Application Publication 0034331).

7. Argument

I. Rejection of claims 1-7, 9-17 and 19-20 in view *Josephsoon, et al.* and *Haupt*

A *prima facie* case of obviousness has three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, requires some reason that the skilled artisan would modify a reference or to combine references.² The Supreme Court has, however, cautioned against the use of “rigid and mandatory formulas” particularly with regards to finding reasons prompting a person of ordinary skill in the art to combine elements in the way the claimed new invention does.³ But rather the Supreme Court suggests a broad, flexible “functional approach” to the obviousness analysis recognizing that “[i]n many fields it may be that there is little discussion of obvious techniques or combinations.”⁴ Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the same time the invention was made. In other words, a hindsight analysis is not allowed.⁵ Lastly, the prior art

² See *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332 (Fed. Cir. 2005) (“[S]imply identifying all of the elements in a claim in the prior art does not render a claim obvious.”).

³ See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”).

⁴ *Id.* See also *Id.* at 1743 F. 3d 1356 (Fed. Cir. 2006) (“Our suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense”) (emphasis in original).

⁵ See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200 (Fed. Cir. 1991) (“Hindsight is not a justifiable basis on which to find that ultimate achievement of a long sought and difficult scientific goal was obvious.”).

reference or combination of references must teach or suggest all the limitations of the claims.⁶

a. The applied art fails to disclose at least one feature of each of claims 1 and 11

i. Claim 1:

Claim 1 recites:

A lighting control network, comprising:
a remote control unit having a RF signal transmitter and a RF signal receiver; and
a plurality of lighting control units, each of said lighting control units having a RF signal transmitter, a RF signal receiver, and a lighting unit associated therewith, wherein ***said remote control unit and said plurality of lighting control units are configured in a master-slave oriented network, one of said plurality of lighting control units and said remote control unit being configured as a master in said network and remaining lighting control units of said plurality of lighting units and said remote control unit being configured as slaves in said network***, and said plurality of lighting control units and said remote control unit communicating bi-directionally with each other via a RF wireless link.

Claim 11 is rejected collectively with claim 1. As such, Applicants respectfully submit that for reasons substantively the same as set forth in the traversal of the rejection of claim 1, the applied art fails to disclose at least the emphasized features of claim 11.

In rejecting claim 1, the Office Action directs Applicants to Fig. 2B and paragraph [0111] of *Josephsoon, et al.* for the alleged disclosure of the emphasized features of claim 1. Applicants respectfully demur.

⁶ See *In re Wilson*, 424 F.2d 1382 (C.C.P.A. 1970) (“All words in a claim must be considered in judging the patentability of that claim against the prior art.”).

In particular, the Office Action relies on remote control unit 220, central control units, 152, 252 and multi-device switches (MDS) 101, 202 for the alleged disclosure of the remote control unit and the lighting control units as specifically recited in claim 1. (See page 2 of the Office Action).

Applicants respectfully submit that the central control units 152, 252 of *Josephsoon, et al.* are not described or otherwise suggested to be a **remote control unit**. At page 3, lines 4-7, the Office Action further asserts:

“In this case, the central control unit (152 or 252) of [the] lighting control unit is configured in a master lighting control, and lighting control units (102s or 202s) configured is a slave oriented network. Since one or more devices coupled to a network may serve as a controller for one or more other devices coupled to the network (e.g., in a master/slave relationship).”

At the outset, Applicants respectfully note the inconsistency of the application of central control units 152, 252 of *Josephsoon, et al.* above with their previously being relied upon as remote control units. Applicants respectfully submit that reliance upon **one element** of the applied art for **two separate features** of a claim renders the rejection improper as one feature is necessarily deficient. Therefore, and for at least this reason, Applicants respectfully submit that the applied art fails to disclose at least one feature of claim 1.

Furthermore, Applicants respectfully submit that the central control unit 252 of *Josephsoon, et al.* is not described or otherwise suggested to be a remote control unit. Notably, paragraph [111] of *Josephsoon, et al.* discloses:

“[0111] Referring now to FIG. 2B, another preferred embodiment of an electrical device control system of this invention, generally 250, is shown to include a central control unit 252 having a housing 254 including an user interface 256 and a processing and control unit 258. The central control unit 252 is connected, via electric wires 260 to a plurality of MDSs 202. One of ordinary skill in the art should recognize that wires 260 can be replaced by any other type of wired communication such as optical fiber, coaxial cable, twisted pairs, shielded twisted pairs or the like or any type of wireless communication such as RF, ultrasound, laser, maser, IR, near IR, microwave, or the like.”

Clearly, central control unit 252 is a central unit and there is no disclosure or suggestion in the portion of *Josephsoon, et al.* to which Applicants are directed that discloses that the central control unit is a remote control unit. However, the remote unit 220 is in communication with the control unit 252, and **not with the MDSs 202**. Assuming *arguendo* but not conceding that the MDSs 202 are lighting control units, it is plain from the teachings of *Josephsoon, et al.*, as relied upon by the Examiner in the Office Action, that the remote unit 220 is **not in communication** with the MDSs 202, **but rather is in communication** with the central control unit 252.

At page 3, the Office Action further asserts:

“In this case, the central control unit (152 or 252) of the lighting control unit is configured in a master lighting control, and lighting control units (102s or 202s) configured is slave oriented network. Since one or more devices coupled to a network may serve as a controller for one or more other devices coupled to the network (e.g., in a master/slave relationship).”

At the outset, the last sentence reproduced above seems to imply a logical conclusion from a given premise. However, there is no logical conclusion stated, rendering the rejection incomplete in this regard. Moreover, assuming *arguendo* but not conceding that it were the case that one or more devices in *Josephsoon, et al.* did serve as a controller for one or more devices coupled to the network, the proffered example of a master/slave relationship is not disclosed in the applied art.

Furthermore, Applicants respectfully submit that there is **no disclosure** whatsoever in *Josephsoon, et al.* of the remote control unit 220 or of the MDSs 202 being **masters in a master-slave configuration**. In furtherance to their position, Applicants note that in the 42 pages of text of *Josephsoon, et al.*, the term ‘slave’ is not used and the term ‘master’ is used in describing a clocking function.

In the Response to Arguments beginning on page 6 of the Office Action, the Examiner asserts:

“Since Josephsoon disclosed the central control unit (152 or 252) being configured as a master in the network (150 or 25) (see fig. 1B and 2B, master in the control (152 or 252);

and remaining lighting control units (102s or 202s) of the plurality of lighting units and the remote control unit (220) being configured as slaves (see fig. 1B or 2B, page 11 section [0111] lines 3-12).”

Applicants respectfully submit that there is no basis for the assertion that the central control unit (152 or 252) of Josephsoon, *et al.* provided in the portion of the applied art relied upon. Again, paragraph [111] of *Josephsoon, et al.* recites:

“[0111] Referring now to FIG. 2B, another preferred embodiment of an electrical device control system of this invention, generally 250, is shown to include a central control unit 252 having a housing 254 including an user interface 256 and a processing and control unit 258. The central control unit 252 is connected, via electric wires 260 to a plurality of MDSs 202. One of ordinary skill in the art should recognize that wires 260 can be replaced by any other type of wired communication such as optical fiber, coaxial cable, twisted pairs, shielded twisted pairs or the like or any type of wireless communication such as RF, ultrasound, laser, maser, IR, near IR, microwave, or the like.

Applicants respectfully submit that there is no description of the configuring of any unit as a master or as a slave, and especially no disclosure that the central control unit is configured as a master as the Office Action asserts. Accordingly, Applicants respectfully submit that the applied art fails to disclose at least one feature of claim 1.

The Office Action concedes that *Josephsoon, et al.* fails to disclose a plurality of lighting control units communicating bi-directionally with each other via an RF wireless link, and turns to *Haupt* in an attempt to cure this deficiency.

The Office Action directs Applicants to paragraph [0031] of *Haupt* for the alleged disclosure of the plurality of lighting control units communicating bi-directionally as set forth in claim 1. Specifically, the Office Action directs Applicants to the central unit 1 and the mobile apparatuses 4 through 9 of *Haupt*. The Office Action asserts that central unit 1 is a “master remote unit.” However, there is **no description that the central unit 1 is a remote control unit**, but rather only that the central unit 1 can control mobile apparatuses 4 through 9. Moreover, while mobile apparatuses 4-9 each have a control module there is no disclosure of a remote control unit with which the mobile apparatuses 4-9 communicate in a bi-directional manner. Rather, the mobile apparatuses 4-9

communicate with control device 3 of central unit 1, which is not disclosed as a remote control unit. Therefore, *Haupt* cannot serve to remedy the deficiencies of Josephsoon, *et al.* as asserted in the Office Action

For at least the reasons set forth above, Applicants respectfully submit that the applied art fails to disclose at least one feature of each of claims 1 and 11. Therefore, a *prima facie* case of obviousness has not been established.

b. The motivation to combine the applied art is improper

A proper combination of references in a rejection for obviousness requires an articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.⁷ Applicants respectfully submit that the reasoning of the Office Action fails to meet this requirement. Notably, the Office Action asserts:

“Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teaching of Mosebrook with Haupt, in order to provide directly or indirectly controlled by the central unit (master unit) (see suggested by Haupt on page 2, section [0029])”

Applicants initially note that no reference to **Mosebrook** is relied upon in the substantive Office Action. Moreover, while the direct or indirect communication is disclosed between the apparatuses 4-9 and the central unit 1 is disclosed, there is no disclosure of a remote control unit as claimed; and there would be no basis for transplanting the direct and indirect communication of a wireless apparatuses 4-9 with any type of remote unit because *Haupt* does not disclose a remote control unit and therefore does not address the need for such communications. Applicants respectfully submit that insufficient motivation to combine *Haupt* with *Josephsoon, et al.* renders their combination improper.

For at least the reasons set forth above, Applicants respectfully submit that a *prima facie* case of obviousness has not been established, and that claims 1 and 11 are

⁷ *KSR Int'l v. Teleflex*, 127 S. Ct. at 1741.

patentable over the applied art. Moreover, claims 2-7, 9 and 11-17, 19-20, which depend from claims 1 and 10, respectively, are also patentable for at least the same reasons.

II. The rejection of claims 8 and 18 under 35 U.S.C. § 103(a) in view of *Josephsoon, et al.*, *Haupt*, and *Crookham, et al.*

Claims 8 and 18 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious in view of *Josephsoon, et al.*, *Haupt* and *Crookham, et al.* Claims 8 and 18 depend from claims 1 and 11, respectively. Applicants respectfully submit that claims 8 and 18 are patentable for at least the same reasons as their respective independent claims.

Conclusion

In view the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted on behalf of:
Philips Electronics North America Corp.

/William S. Francos/
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APPENDIX

Claims on Appeal

1. A lighting control network, comprising:

a remote control unit having a RF signal transmitter and a RF signal receiver; and
a plurality of lighting control units, each of said lighting control units having a RF signal transmitter, a RF signal receiver, and a lighting unit associated therewith, wherein said remote control unit and said plurality of lighting control units are configured in a master-slave oriented network, one of said plurality of lighting control units and said remote control unit being configured as a master in said network and remaining lighting control units of said plurality of lighting units and said remote control unit being configured as slaves in said network, and said plurality of lighting control units and said remote control unit communicating bi-directionally with each other via a RF wireless link.

2. The lighting control network of claim 1, further comprising a sensor for sensing a parameter and transmitting a status of said parameter to said master.

3. The lighting control network of claim 2, wherein said sensor is selected from the group consisting of: an ambient light sensor, a motion sensor, an occupancy sensor, a temperature sensor, and a combination thereof.

4. The lighting control network of claim 2, wherein said sensor communicates via a RF wireless link with said master.

5. The lighting control network of claim 2, wherein said master is one of said plurality of lighting control units and controls said lighting unit associated therewith in response to receiving said status of said parameter.

6. The lighting control network of claim 1, wherein a user interface control on said remote control unit is associated with at least one of said plurality of lighting control

units.

7. The lighting control network of claim 1, wherein said slaves communicate directly with said master via RF wireless communication.

8. The lighting control network of claim 1, further comprising a central control master for interfacing multiple instances of said lighting control network together.

9. The lighting control network of claim 1 wherein said network combines a RF communication protocol and a lighting control protocol.

10. The lighting control network of claim 1, further comprising a mechanism for selecting back-up to said master.

11. A method for configuring a lighting control network, comprising:

configuring a remote control unit having a RF signal transmitter and a RF signal receiver and a plurality of lighting control units, each of said lighting control units having a RF signal transmitter, a RF signal receiver, and a lighting unit associated therewith, in a master-slave oriented network;

designating one of said plurality of lighting control units and said remote control unit as a master in said network and designating remaining lighting control units of said plurality of lighting units and said remote control unit as slaves in said network; and

communicating bi-directionally between said plurality of lighting control units and said remote control unit via a RF wireless link.

12. The method claim 11, further comprising associating a sensor for sensing a parameter and transmitting a status of said parameter to said master with at least one of said plurality of lighting control units.

13. The method of claim 12, wherein said sensor is selected from the group consisting of: an ambient light sensor, a motion sensor, an occupancy sensor, a temperature sensor, and a combination thereof.
14. The method of claim 12, further comprising said sensor communicating via a RF wireless link with said master.
15. The method of claim 12, comprising one of said plurality of lighting control units configured as said master and controlling said lighting unit associated therewith in response to receiving said status of said parameter.
16. The method of claim 11, further comprising associating a user interface control on said remote control unit with at least one of said plurality of lighting control units.
17. The method of claim 11, further comprising said slaves communicating directly with said master via RF wireless communication.
18. The method of claim 11, further comprising interfacing multiple instances of said lighting control network together through a central control master.
19. The method of claim 11 wherein said network combines a RF communication protocol and a lighting control protocol.
20. The method of claim 11, further comprising selecting a back-up to said master.

APPENDIX

Evidence (NONE)

APPENDIX

Related Proceedings (NONE)